

REMARKS/ARGUMENTS

Reconsideration and allowance of the above-identified application are respectfully requested. Upon entry of this Amendment, claims 1-24 will be pending.

The Examiner alleges that claims 1-19 are unpatentable under 35 U.S.C. §103(a) over Applicant's submitted prior art in view of U.S. Patent No. 4,609,267 to Deguchi et al. Regarding claims 1, 6 and 13, the Examiner suggests that the submitted prior art discloses a camera including a zoom lens optical system including a junction lens device made by joining a high refractive lens and a low refractive lens using an adhesive. The Examiner admits that the submitted prior art does not disclose a coating layer formed between the adhesive and one of the lens surfaces to reduce a reflection ratio on the junction surface. However, the Examiner cites Deguchi as teaching an antireflection layer disposed between two layers of different refractive indexes.

Applicant respectfully traverses the Examiner's rejection. Deguchi teaches inserting an antireflection layer between a high refractive index *lens* and a low refractive index *hardening layer*, rather than between two lenses as in the present invention. The problem overcome in Deguchi is an interference wave generated at the antireflection layer on top of the hardening layer due to reflection at the interface of the hardening layer and the lens. The interference wave (or ripple) is only possible because of the small thickness dimension of the hardening layer.

By contrast embodiments of the present invention are directed to a lens device formed by joining two *lenses* together using an adhesive and an antireflection coating on the lens having a refractive index furthest from the refractive index of the adhesive in order to

minimize reflectance and the interface of the two lenses. This *macroscopic* process advantageously reduces ghosts and flares present in conventional junction lens devices.

In embodiments of the present invention, the antireflective coating must be formed on the correct one of the two joined lenses in order to minimize reflectance at the lens interface. Also, the index matching is performed between a lens and an adhesive, as opposed to a lens and a hardening layer, as in Deguchi. While Applicant admits that the submitted prior art teaches two lenses joined with an adhesive, neither the cited art nor Deguchi teach an antireflective coating formed between one of the two lenses and the adhesive. Also, neither the submitted prior art nor Deguchi suggest which lens to form the coating on. Embodiments of the present invention are directed to “a junction lens device made by joining a high refractive *lens* and a low refractive *lens* using an adhesive, *wherein a coating layer for index matching* is formed on a surface of at least one . . . *lens contacting the adhesive to reduce a reflection ratio* on a junction surface.” Neither the cited prior art nor Deguchi teach or suggest these features of a junction lens device. Accordingly withdrawal of the rejection is respectfully requested.

The Examiner has rejected claims 4, 10 and 17 for similar reasons as stated with respect to claims 1, 6 and 13. In addition, the Examiner suggests that reducing a reflection ratio to not more than about 0.2% would be within the knowledge of one of ordinary skill in the art given the teaching of Deguchi. Regardless of whether one of ordinary skill in the art would know to choose a coating layer to reduce a reflection ratio below about 0.2%, the cited prior art and Deguchi are deficient for the same reasons discussed above with respect to claims 1, 6 and 13. Namely, neither the cited art nor Deguchi teach or suggest forming a

coating layer on a first *lens* between the first lens and an adhesive on a second *lens*. Accordingly, withdrawal of this rejection is respectfully requested.

The Examiner has rejected dependent claims 2, 7 and 14 for substantially the same reasons as discussed above with respect to independent claims 4, 10 and 17. Accordingly, the arguments discussed above apply equally to claims 2, 7 and 14.

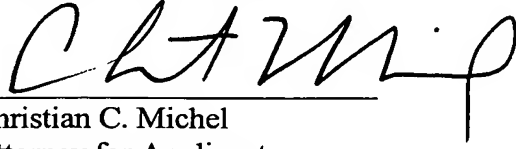
The Examiner has rejected dependent claims 3, 5, 8, 9, 11, 12, 15, 16, 18 and 19 as adding features that would be within the knowledge of one of ordinary skill in the art (difference in refractive index of two lenses not less than about 0.15), or that are shown in the cited prior art (junction lens device used as a front lens of a zoom lens optical system). Nevertheless, each of these claims depend from independent claims discussed above, and include all of the limitations of the respective independent claims. Thus, the arguments discussed above with respect to independent claims 1, 4, 6, 10, 13, and 17 apply equally to dependent claims 3, 5, 8, 9, 11, 12, 15, 16, 18 and 19. Accordingly, allowance of these claims is respectfully requested.

Applicants have added new claims 20-23 directed to a method of manufacturing a junction lens device, and claim 24 directed to a junction lens device manufactured using the method of claim 20. Applicants submit that these claims are patentable over the cited prior art and Deguchi for at least the reasons discussed above. Furthermore, the new claims further define the scope of the present invention. Allowance of claims 20-24 is respectfully requested.

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In view of the above, it is believed that the application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the telephone number indicated below.

Respectfully Submitted,


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